



[0019] wherein, in Chemical Formula II,

[0020] R^4 to R^{17} are independently hydrogen, deuterium, a substituted or unsubstituted C1 to C30 alkyl group, a substituted or unsubstituted C6 to C30 aryl group, a substituted or unsubstituted C2 to C30 heteroaryl group, or a combination thereof,

[0021] adjacent two of R^4 to R^{10} and R^{11} to R^{17} are linked to each other to provide a ring,

[0022] R^{18} and R^{19} are independently hydrogen, deuterium, a substituted or unsubstituted C1 to C30 alkyl group, a substituted or unsubstituted C2 to C30 cycloalkyl group, a substituted or unsubstituted C6 to C30 aryl group, a substituted or unsubstituted C2 to C30 heteroaryl group, a substituted or unsubstituted C6 to C30 arylamine group, a substituted or unsubstituted C1 to C30 alkoxy group, a substituted or unsubstituted C2 to C30 alkoxycarbonyl group, a substituted or unsubstituted C2 to C30 alkoxycarbonylamino group, a substituted or unsubstituted C7 to C30 aryloxycarbonylamino group, a substituted or unsubstituted C1 to C30 sulfamoylamino group, a substituted or unsubstituted C2 to C30 alkenyl group, a substituted or unsubstituted C2 to C30 alkynyl group, a substituted or unsubstituted C3 to C40 silyl group, a substituted or unsubstituted C3 to C40 silyloxy group, a substituted or unsubstituted C1 to C30 acyl group, a substituted or unsubstituted C1 to C20 acyloxy group, a substituted or unsubstituted C1 to C20 acylamino group, a substituted or unsubstituted C1 to C30 sulfonyl group, a substituted or unsubstituted C1 to C30 alkylthiol group, a substituted or unsubstituted C6 to C30 arylthiol group, a substituted or unsubstituted C1 to C30 ureide group, a halogen, a halogen-containing group, a cyano group, a hydroxyl group, an amino group, a nitro group, a carboxyl group, a ferrocenyl group, or a combination thereof, and

[0023] n is an integer ranging from 1 to 4.

[0024] According to another embodiment, provided is an organic optoelectric diode including an anode and a cathode facing each other, and at least one organic layer between the anode and the cathode, wherein the organic layer includes the composition.

[0025] Another embodiment provides a display device including the organic optoelectric diode.

Advantageous Effects

[0026] An organic optoelectric diode having high efficiency long life-span may be realized.

DESCRIPTION OF THE DRAWINGS

[0027] FIGS. 1 and 2 are cross-sectional views showing organic light emitting diodes according to embodiments.

DESCRIPTION OF SYMBOLS

- [0028] 100, 200: organic light emitting diode
 [0029] 105: organic layer
 [0030] 110: cathode
 [0031] 120: anode
 [0032] 130: light-emitting layer
 [0033] 140: hole auxiliary layer

BEST MODE

[0034] Hereinafter, embodiments of the present invention are described in detail. However, these embodiments are exemplary, the present invention is not limited thereto and the present invention is defined by the scope of claims.

[0035] In the present specification, when a definition is not otherwise provided, "substituted" refers to one substituted with deuterium, a halogen, a hydroxy group, an amino group, a substituted or unsubstituted C1 to C30 amine group, a nitro group, a substituted or unsubstituted C1 to C40 silyl group, a C1 to C30 alkyl group, a C1 to C10 alkylsilyl group, a C3 to C30 cycloalkyl group, a C3 to C30 heterocycloalkyl group, a C6 to C30 aryl group, a C6 to C30 heteroaryl group, a C1 to C20 alkoxy group, a fluoro group, a C1 to C10 trifluoroalkyl group such as a trifluoromethyl group, or a cyano group, instead of at least one hydrogen of a substituent or a compound.

[0036] In addition, two adjacent substituents of the substituted halogen, hydroxy group, amino group, substituted or unsubstituted C1 to C20 amine group, nitro group, substituted or unsubstituted C3 to C40 silyl group, C1 to C30 alkyl group, C1 to C10 alkylsilyl group, C3 to C30 cycloalkyl group, C3 to C30 heterocycloalkyl group, C6 to C30 aryl group, C6 to C30 heteroaryl group, C1 to C20 alkoxy group, fluoro group, C1 to C10 trifluoroalkyl group such as trifluoromethyl group and the like, or cyano group may be fused with each other to form a ring. For example, the substituted C6 to C30 aryl group may be fused with another adjacent substituted C6 to C30 aryl group to form a substituted or unsubstituted fluorene ring.

[0037] In the present specification, when specific definition is not otherwise provided, "hetero" refers to one including at least one hetero atom selected from the group consisting of N, O, S, P, and Si, and remaining carbons in one functional group.

[0038] In the present specification, when a definition is not otherwise provided, "alkyl group" refers to an aliphatic hydrocarbon group. The alkyl group may be "a saturated alkyl group" without any double bond or triple bond.

[0039] The alkyl group may be a C1 to C30 alkyl group. More specifically, the alkyl group may be a C1 to C20 alkyl group or a C1 to C10 alkyl group. For example, a C1 to C4 alkyl group may have 1 to 4 carbon atoms in an alkyl chain which may be selected from methyl, ethyl, propyl, isopropyl, n-butyl, iso-butyl, sec-butyl, and t-butyl.

[0040] Specific examples of the alkyl group may be a methyl group, an ethyl group, a propyl group, an isopropyl group, a butyl group, an isobutyl group, a t-butyl group, a pentyl group, a hexyl group, a cyclopropyl group, a cyclobutyl group, a cyclopentyl group, a cyclohexyl group, and the like.

[0041] In the present specification, "aryl group" refers to a substituent including all element of the cycle having p-orbitals which form conjugation, and may be monocyclic,